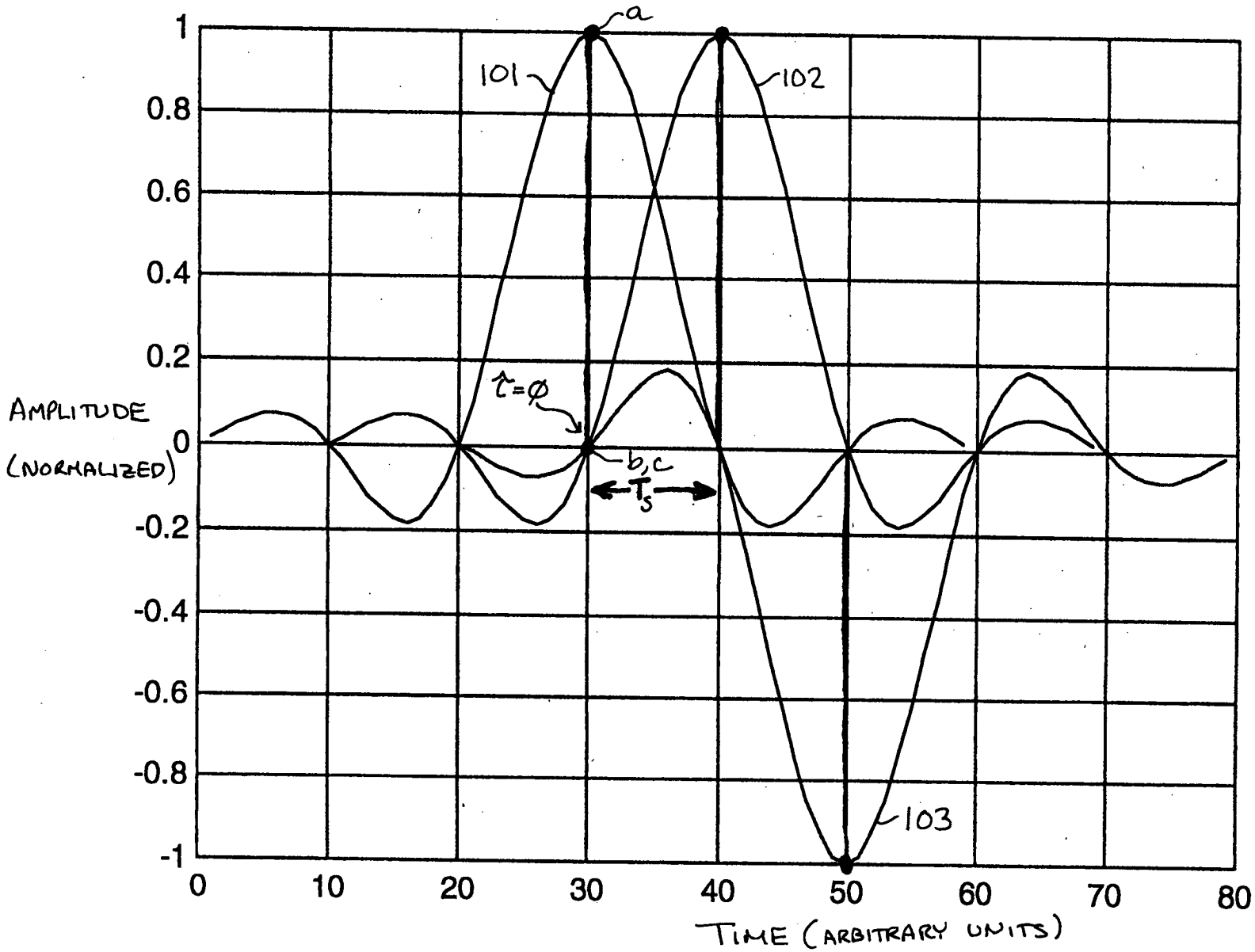


FIG. 1A
(PRIOR ART)

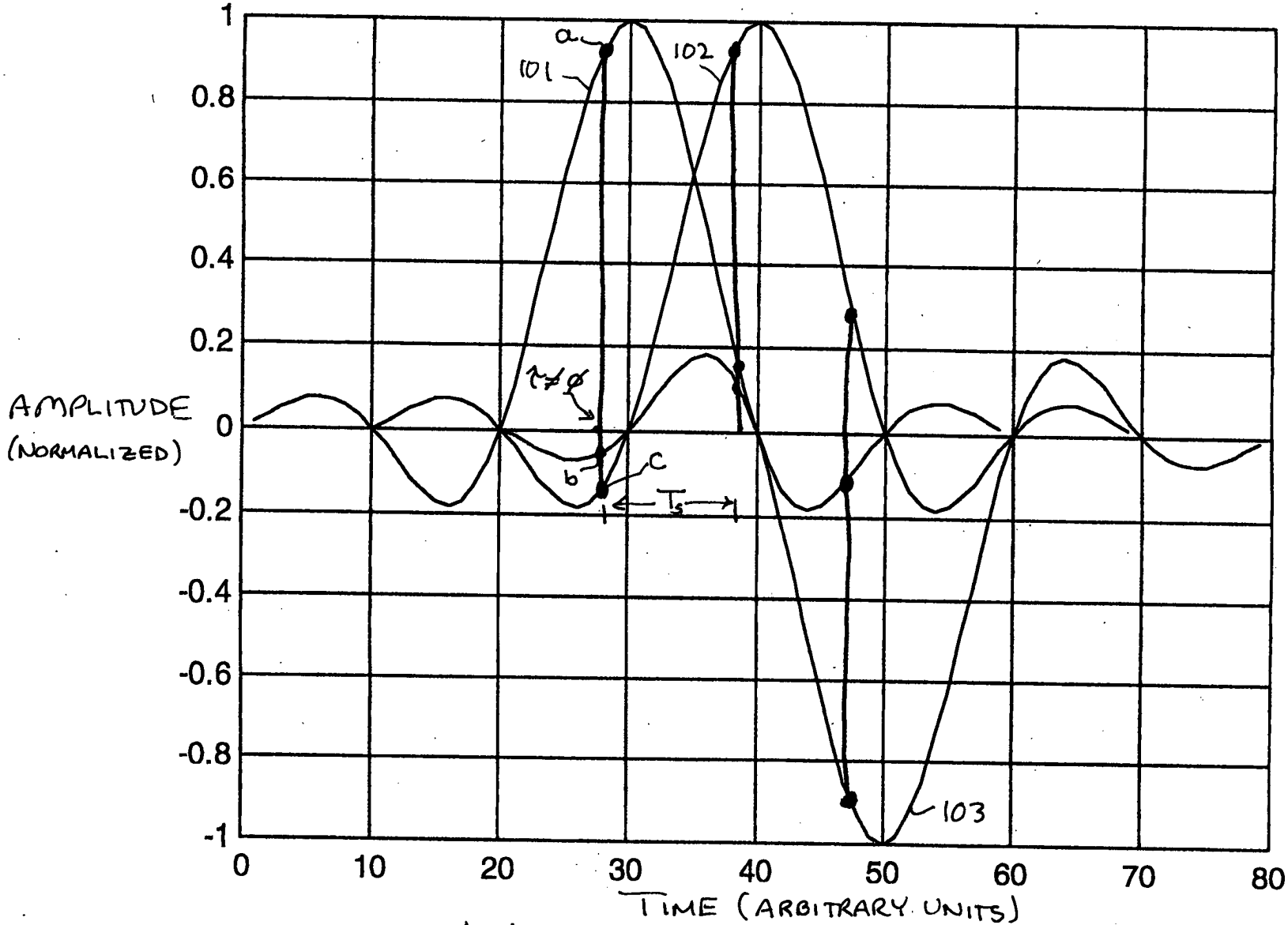


FIG. 1B
(PRIOR ART)

Non ideal sampling yielding ISI. $\tau \neq 0$

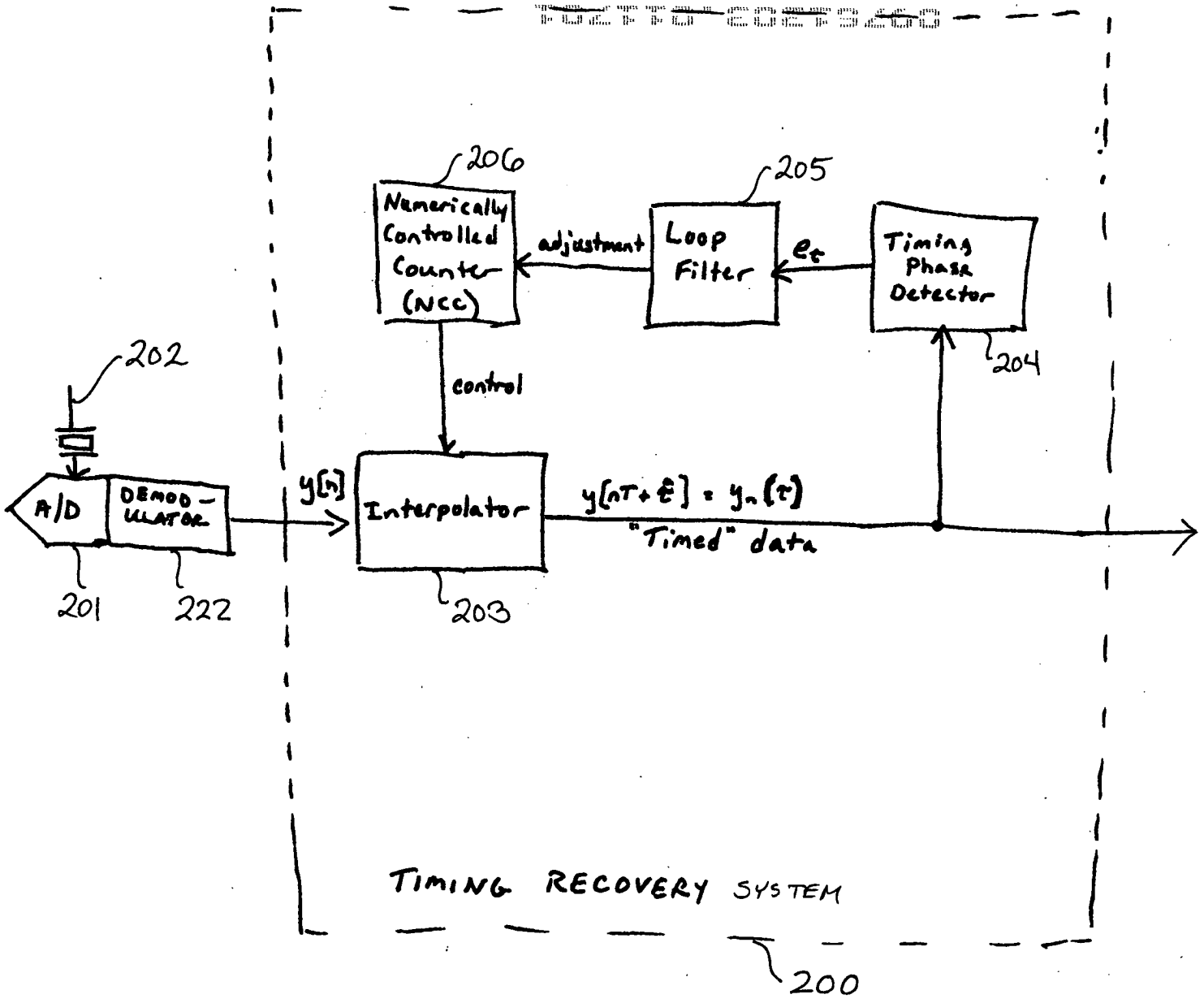


FIG. 2 (PRIOR ART)

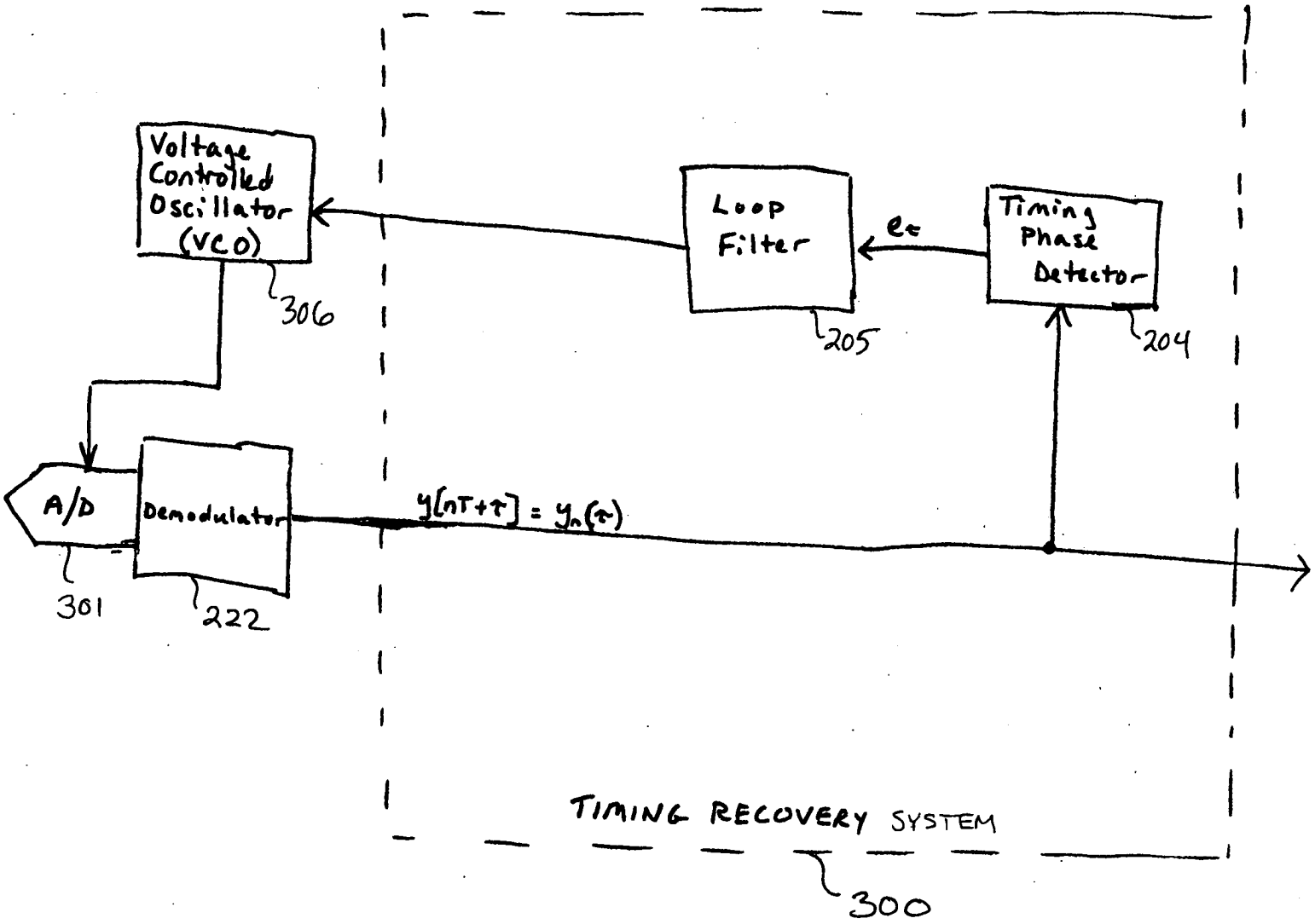
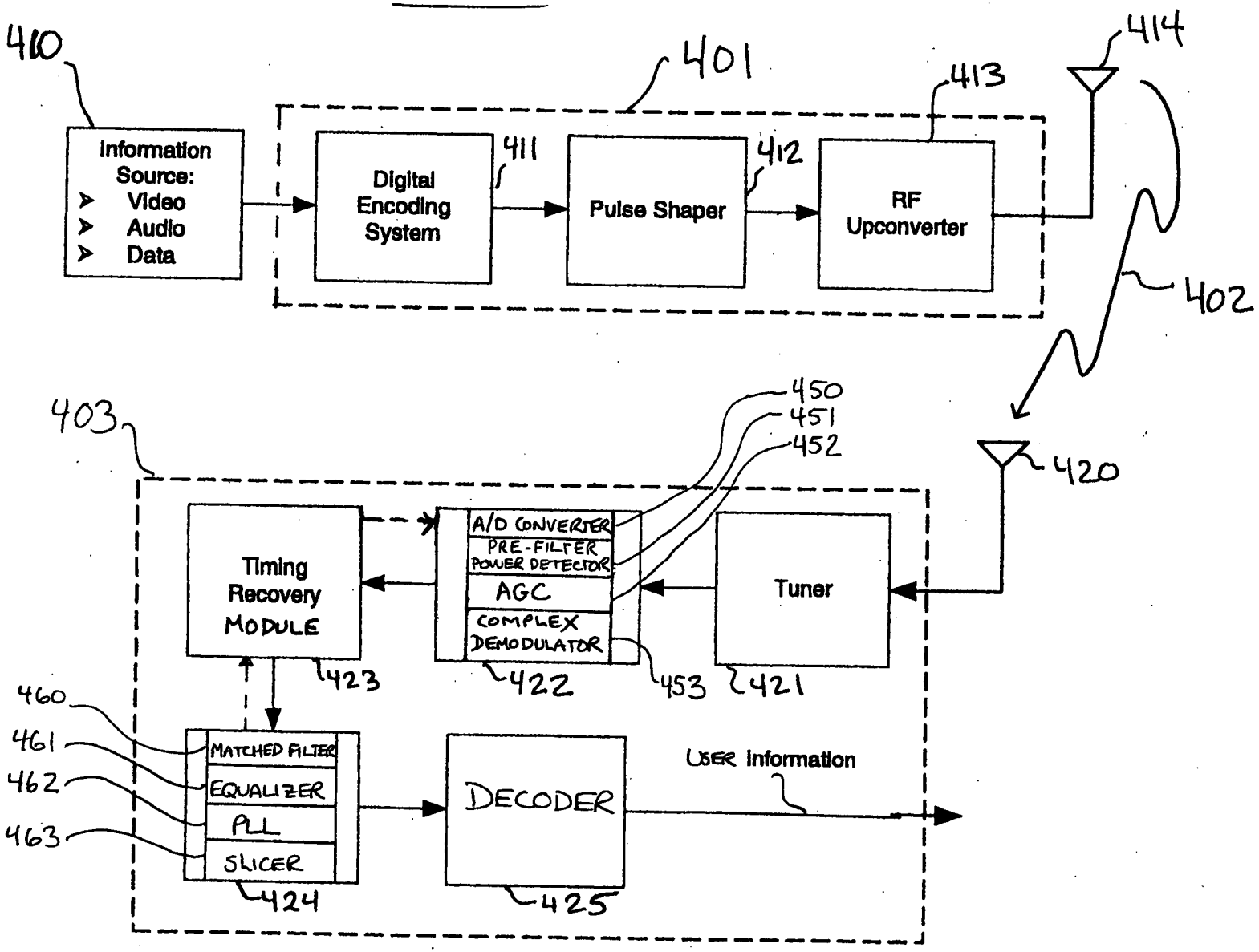


FIG. 3
(PRIOR ART)

PLACED ELSEWHERE

400

FIG. 4



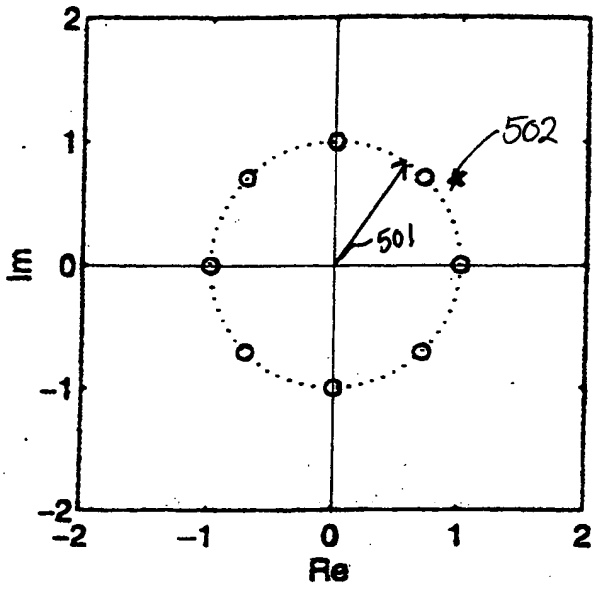


FIG. 5A

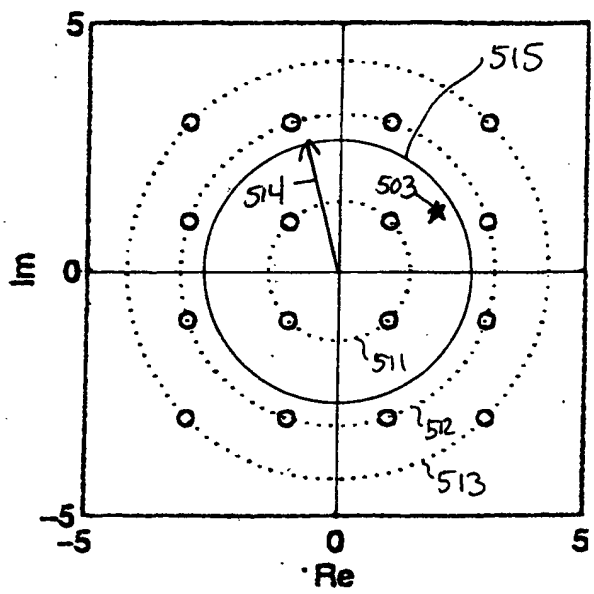


FIG. 5B

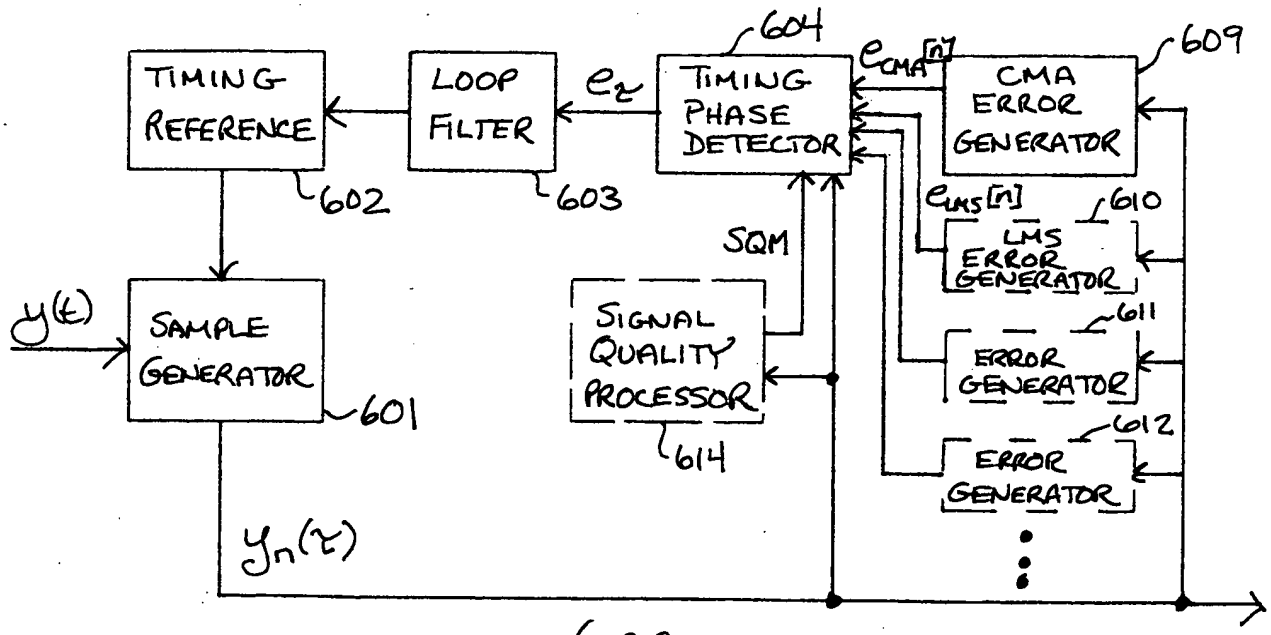


FIG. 6

PATENT APPLICATION

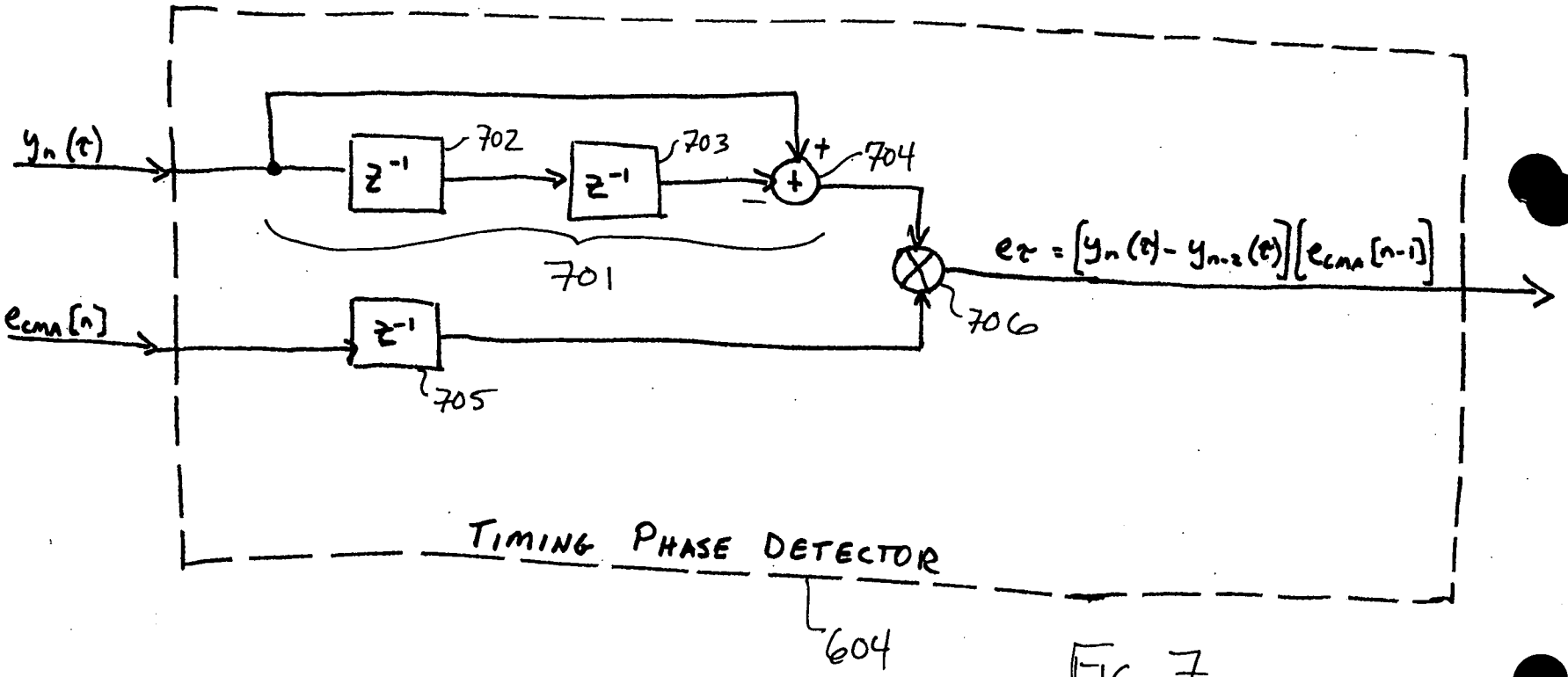


FIG. 7

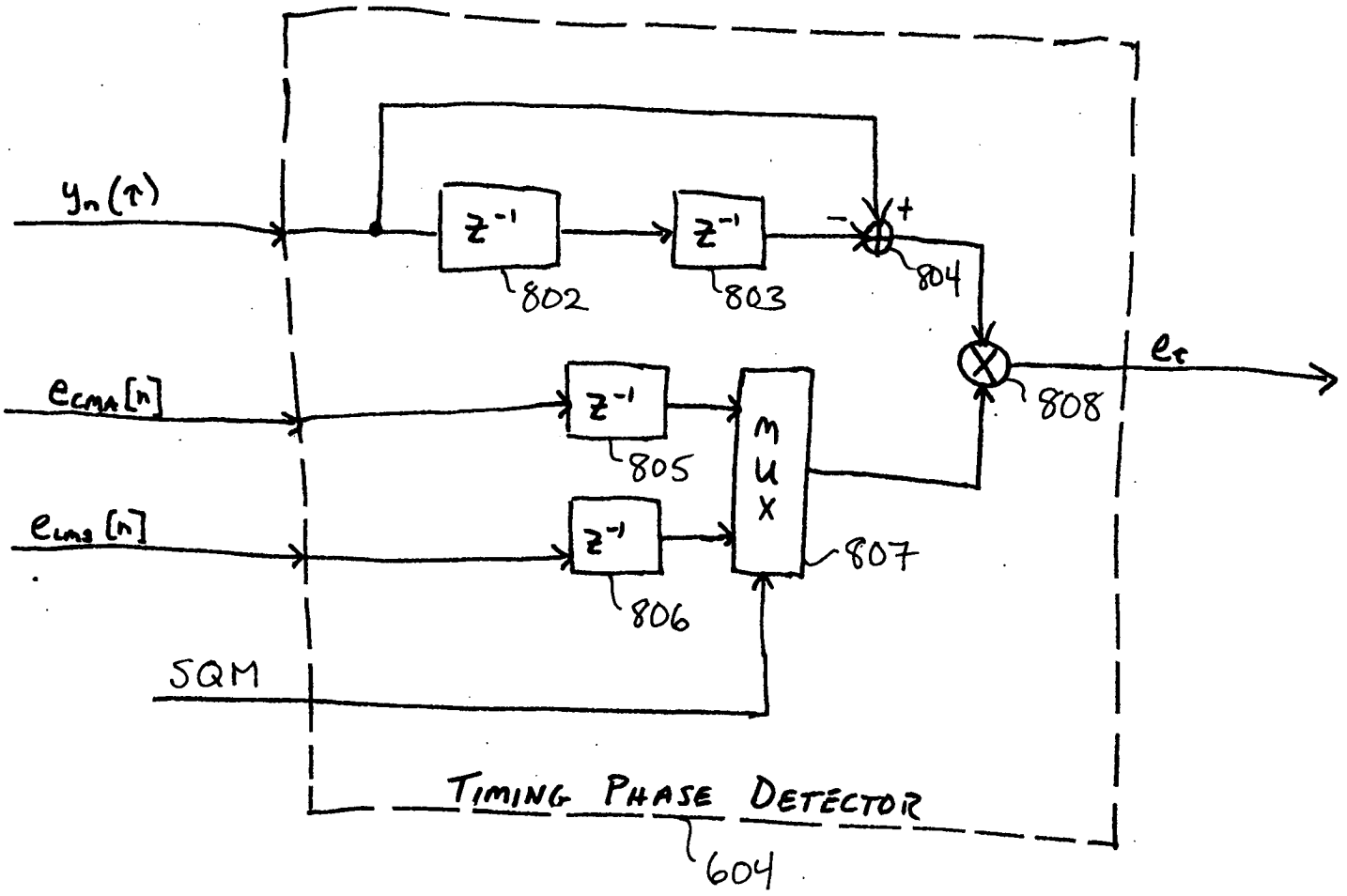

$y_n(\tau)$
z^{-1}
802
z^{-1}
803
−
+
804
$e_{CMA}[n]$
z^{-1}
805
$e_{LMS}[n]$
z^{-1}
806
MUX
807
808
e_τ
SQM
TIMING PHASE DETECTOR
604

FIG. 8

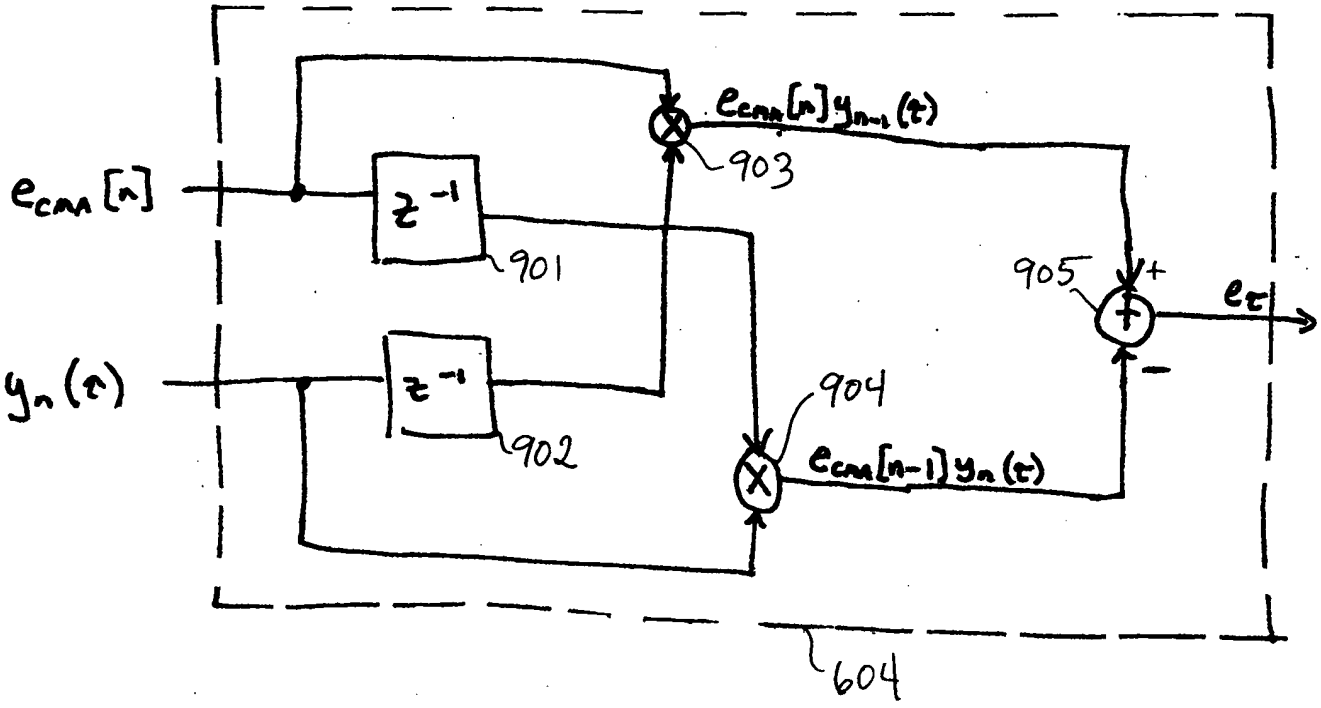

$e_{cmn}[n]$
z^{-1}
901
$y_n(t)$
z^{-1}
902
$e_{cmn}[n]y_{n-1}(t)$
903
904
$e_{cmn}[n-1]y_n(t)$
905
+
−
e_t
604

FIG. 9

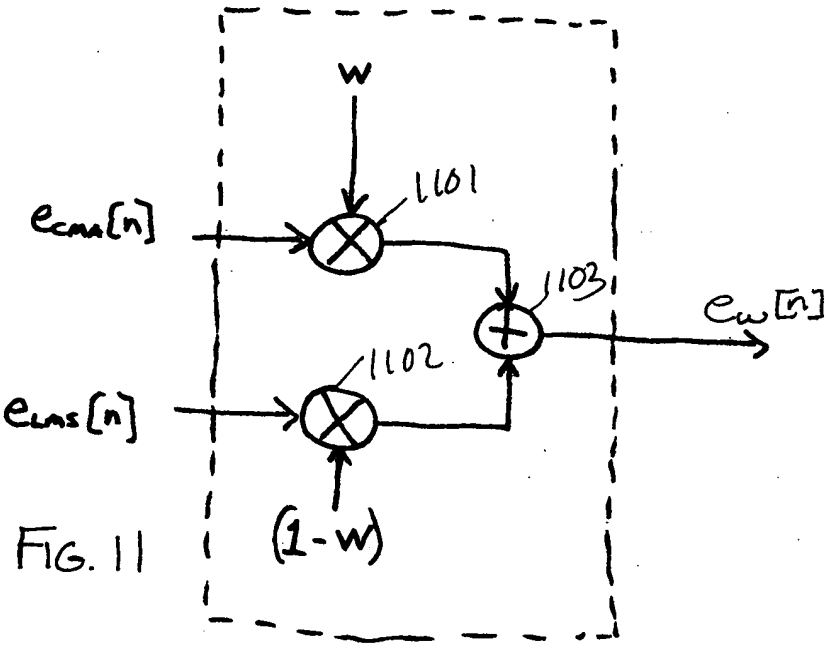

w
1101
$e_{cmn}[n]$
1103
$e_w[n]$
1102
$e_{cms}[n]$
(1-w)

FIG. 11

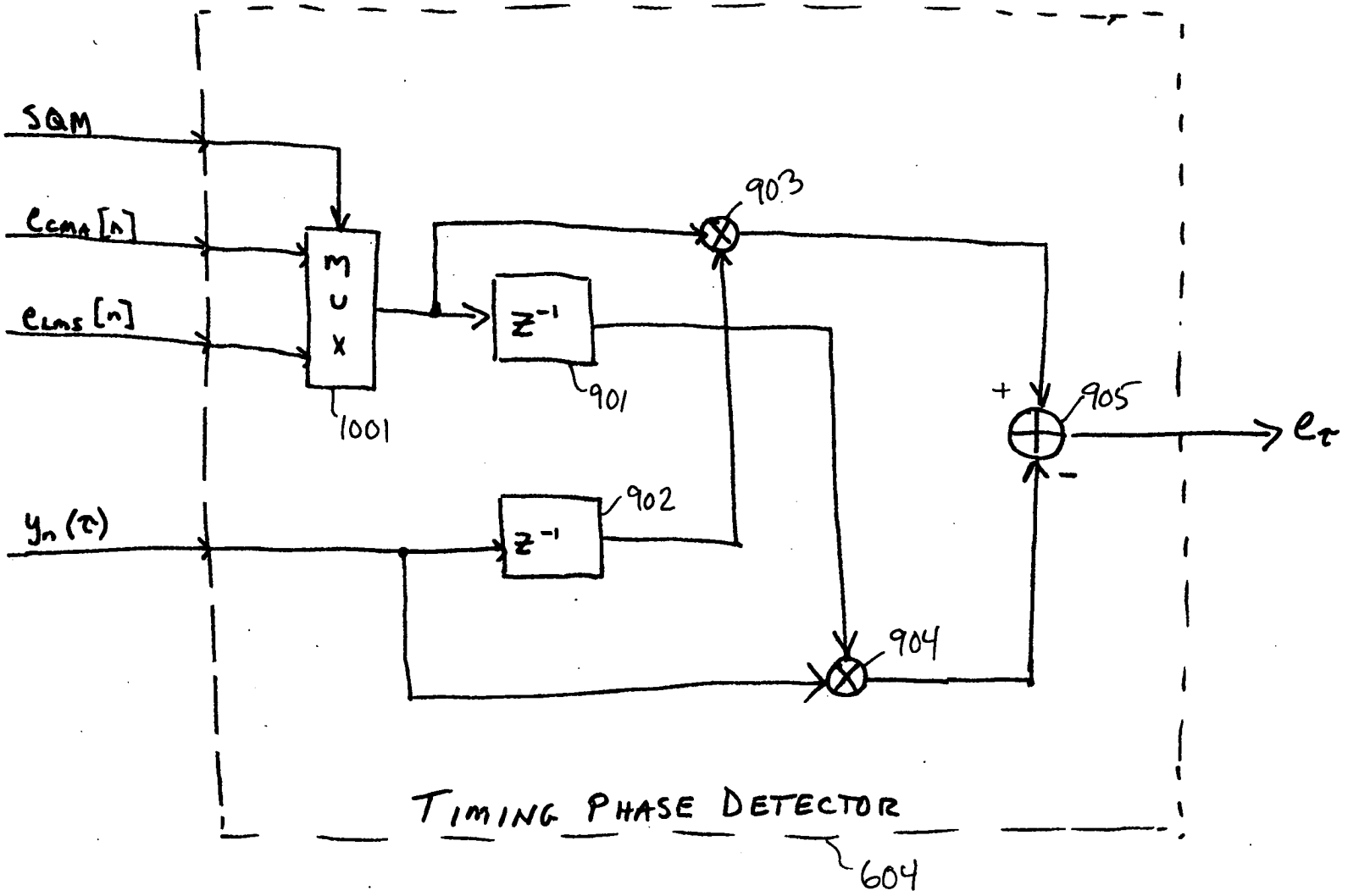

SQM
$e_{CMA}[n]$
$e_{LMS}[n]$
MUX
1001
z^{-1}
901
903
z^{-1}
902
$y_n(\tau)$
904
+
905
−
e_τ
TIMING PHASE DETECTOR
604

FIGURE 10

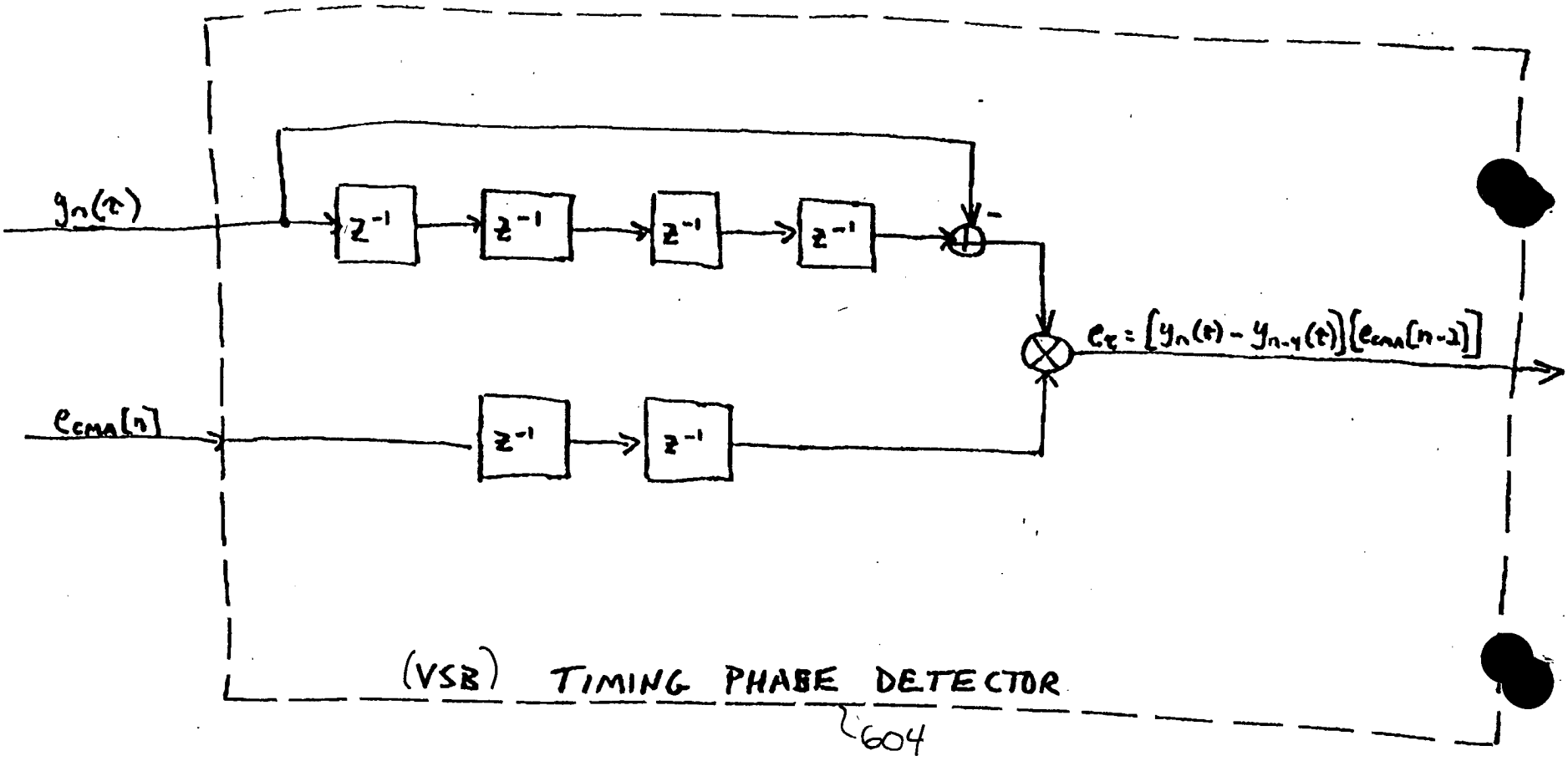

$y_n(\tau)$
z^{-1}
z^{-1}
z^{-1}
z^{-1}
-
$e_{cma}[n]$
z^{-1}
z^{-1}
$e_t = [y_n(t) - y_{n-4}(t)][e_{cma}[n-1]]$
(VSB) TIMING PHASE DETECTOR
604

FIGURE 12

PATENT APPLICATION

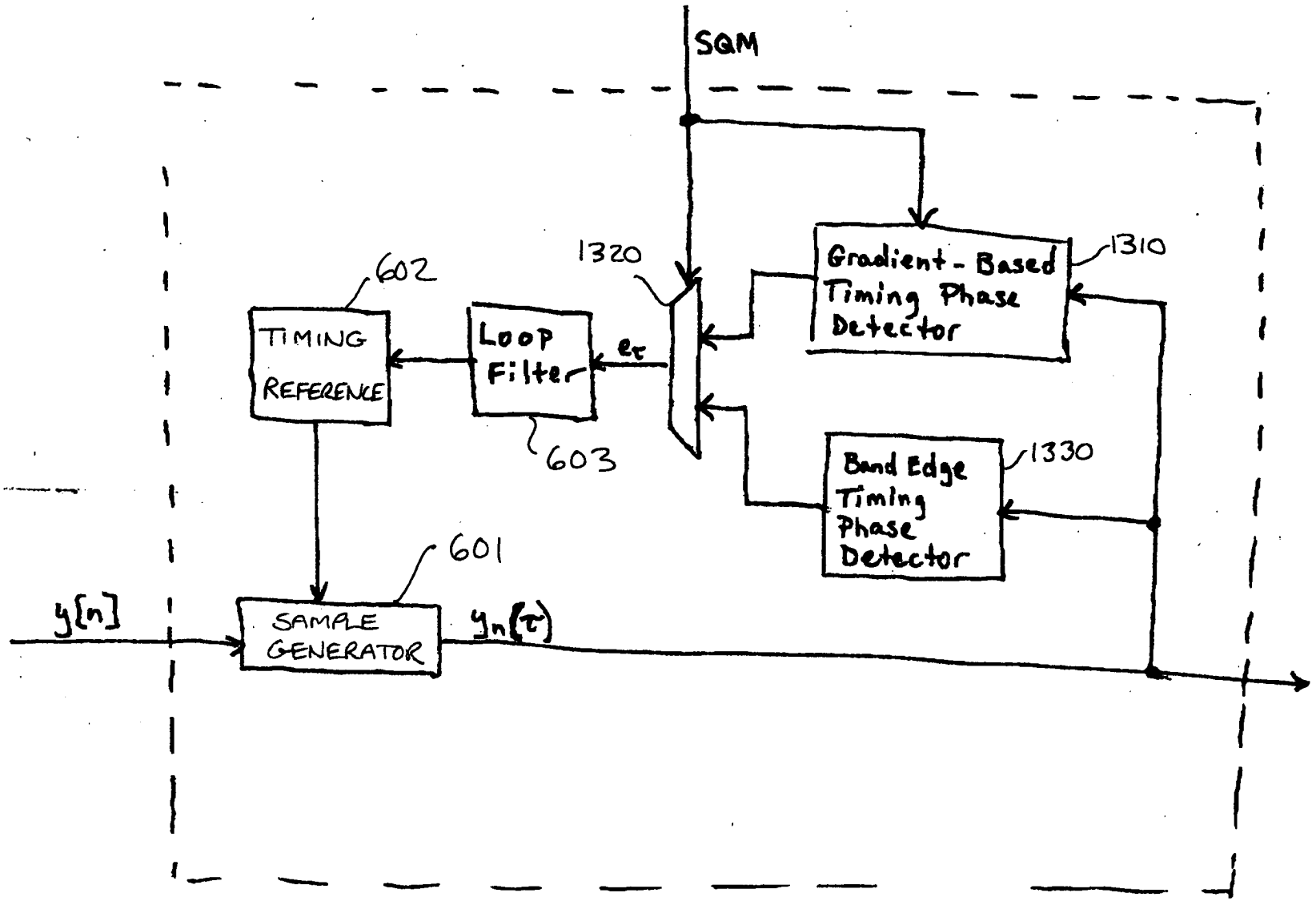


FIG. 13